

Modeling inflammatory edema: Are the models interchangeable

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Abstract

Experimental modeling of inflammatory edema by sub-plantar injection of carrageenan and formalin in mice and rats is widely used to evaluate potential anti-inflammatory activity of new drugs. This systematic analysis of published data showed that carrageenan induced paw edema model is used for evaluating the anti-inflammatory activity mostly in rats rather than mice. Formalin induced paw edema in rats and mice is used primarily for evaluation of the analgesic activity of drugs. Taken together, the results of this systematic review of available literature on edema modeling substantiate recommendation to use carrageenan paw edema in rats and formalin paw edema in mice as complementary, but not interchangeable models of inflammation.

Keywords

Carrageenan induced edema model, Formalin induced edema model, Mice, Paw edema, Rats